

Remarks

This amendment is in response to the Office Action dated April 2, 2002 wherein the examiner rejected claims 1-16.

The Examiner first indicated that formal drawings are required with the response to the Office Action. No reason is given by the Examiner as to why formal drawings are required at this early stage in response to a non-final, first office action. Applicant assumes that the examiner meant to indicate that formal drawings will be required at the appropriate time during prosecution.

The Examiner next rejected claims 11-16 under 35 USC 112 as being indefinite regarding the location of the "operator's seat." Applicant has corrected claim 11, which should overcome this rejection.

The Examiner next rejected claims 1,4,6,7 and 11 under 35 USC 102(b) as being anticipated by *Newton*. Applicant has amended claims 1 and 11, which claims now set forth that the crane comprises a center post mounted in a central region of the trailer. The crane in *Newton* is not mounted in a central region of the trailer; it is mounted at a front end of the trailer. A central region mounting of the crane in *Newton* would defeat the purpose of *Newton*, that being a loader crane for loading and unloading materials carried by the bed of the trailer, over the bed of the trailer. A crane mounted in the central region of the bed would severely limit the useable cargo area of the bed.

Applicant submits that this rejection has been overcome and requests allowance of these claims.

The Examiner next rejected claims 1, 4 and 9 under 35 USC 102(b) as being anticipated by *Reinert*. However, *Reinert* also does not disclose a center post for a crane that extends from a central region of a trailer. The foundation installation apparatus of *Reinert* does not disclose a crane, and furthermore the working apparatus of *Reinert* is mounted at a front of the carriage.

Applicant submits that this rejection has been overcome and requests allowance of these claims.

The Examiner next rejected claims 1, 6-8, 11, and 13, under 35 USC 102(b) as being anticipated by SE 308,381. Applicant does not have an English translation of this reference; however, the figures of SE 308,381 do not show a trailer wherein a center post of a crane extends from a central region of the trailer. In the figures, the crane includes supports 28/27 which are located substantially directly beneath the crane center post for supporting the crane directly from the ground.

Applicant submits that this rejection has been overcome and requests allowance of these claims.

The Examiner next rejected claim 3 under 35 USC 103(a) as being unpatentable over SE 308,381, *Newton*, or *Reinert*. However, based on the asserted allowability of claim 1, claim 3 should also be allowable over these references as none of these references disclose or teach the location of a crane center post in a central region of a trailer.

Applicant submits that this rejection has been overcome and requests allowance of claim 3.

The Examiner next rejected claims 1-5 and 9 under 35 USC 103(b) as being unpatentable over *Tuenkers* in view of *Reinert*. *Tuenkers* merely describes a hydraulic vibratory pile driver. Therefore, *Tuenkers* and *Reinert* both fail to show the center post of a crane extending from a central region of a trailer.

Applicant submits that this rejection has been overcome and requests allowance of these claims.

The Examiner next rejected claims 1-3 and 5-13 under 35 USC 103(a) as being unpatentable over *Van Halteren* in view of SE 308,381. *Van Halteren* only describes a vibrating hammer and does not describe a crane having a center post extending from a central region of a trailer. Therefore, *Van Halteren* and SE 308,381 both fail to show the center post of a crane extending from a central region of a trailer.

Applicant submits that this rejection has been overcome and requests allowance of these claims.

The Examiner next rejected claims 4 and 14-16 under 35 USC 103(a) as being unpatentable over *Van Halteren* in view of SE 308,381. However, based on the asserted allowability of claims 1 and 11, these claims should now also be allowable as neither of these references disclose or teach the location of a crane center post in a central region of a trailer.

Applicant submits that this rejection has been overcome and requests allowance of these claims.

The Examiner next rejected claim 10 under 35 USC 103(b) as being unpatentable over *Reinert*. However, based on the asserted allowability of claim 1,

claim 10 should be allowable as well as this reference does not disclose or teach the location of a crane center post in a central region of a trailer.

Applicant submits that this rejection has been overcome and requests allowance of claim 10.

The invention provides a mobile crane in the form of a trailer-mounted crane apparatus which includes a trailer supported on wheels from the ground. A crane is mounted onto a central region of the trailer and includes a crane arm that is extendable outwardly of the trailer. Unlike cranes which use a crane mounted on an end or outside a lateral edge of the trailer, the crane of the present invention minimizes the footprint of the crane to be more useable in close quarters.

The trailer-mounted crane can be configured of a sufficiently light weight to be usable upon delicate ground surfaces, such as are present on a golf course, without damaging the surfaces, such as might occur using a larger, heavier crane.


Applicant has amended claims 11, and 13-16 above to replace the term "platform" with "trailer" for term consistency with the disclosure.

Applicant has added new claims 17-25 which describe patentable subject matter. Claim 21 finds support in the specification at page 14, lines 8 and 9 using the trailer weight equal to 5600 pounds and the crane weight equal to 2700 pounds.

Applicant submits that all claims are now in condition for allowance.

Respectfully submitted,

BY



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In The Claims:

Please amend claim 1 as follows:

1. (Amended) A mobile crane apparatus, comprising:
a trailer supported on at least one pair of wheels;
a hydraulically operated crane having a center post and a boom, said center post supported [on] to extend upwardly from a central region of said trailer and said boom extendable outwardly from said center post [therefrom]; and
a [an] crane operator control station carried by said trailer.

Please amend claim 11 as follows:

11. (Amended) A trailer-mounted crane apparatus, comprising:
a [platform] trailer supported from a ground surface on at least two wheels;
a hydraulically operated crane arm extendable from a post, said post mounted to said [platform] trailer to extend upwardly from a central region of said trailer, said crane arm [and] extendable from said post [therefrom];
a hydraulic crane power unit mounted to said [platform] trailer for supplying pressurized hydraulic fluid to said crane arm;
a control panel for said hydraulic power unit mounted on said trailer [platform]; and
an operator seat supported from said trailer [platform] and arranged [in front of] to face said control panel.

Please amend claim 13 as follows:

13. (Amended) The trailer-mounted crane apparatus according to claim 12, wherein said crane arm includes a longitudinally extended hydraulic cylinder mounted longitudinally along said trailer [platform].

Please amend claim 14 as follows:

14. (Amended) The trailer-mounted crane apparatus according to claim 13, wherein said hydraulic crane power unit is mounted on said trailer [platform] in front of said crane, and said control panel and said operator seat are mounted in front of said hydraulic crane power unit and laterally of said crane, and said hydraulic crane power unit is mounted in front of said crane.

Please amend claim 15 as follows:

15. (Amended) The trailer-mounted crane apparatus according to claim 14, further comprising a sheet pile driver retainer extending rearwardly of said trailer [platform], and mounted to said trailer [platform].

Please amend claim 16 as follows:

16. (Amended) The trailer-mounted crane apparatus according to claim 14, further comprising a sheet pile driver cradle mounted to said trailer [platform] on a side of said crane opposite to said operator's seat.

Please add the following new claims 17-25:

17. (New) A mobile crane apparatus, comprising:
 - a trailer supported on at least one pair of wheels; and
 - a hydraulically operated crane having a center post and a boom, said center post supported to extend upwardly from a central region of said trailer and said boom extendable outwardly from said center post.
18. (New) The mobile crane apparatus according to claim 17, further comprising a vibratory sheet pile driver suspended from said boom, and said mobile crane apparatus further comprises a hydraulic driver power unit for driving said vibratory sheet pile driver.
19. (New) The mobile crane apparatus according to claim 17 wherein said hydraulically operated crane comprises an elongated cylinder extending longitudinally along said trailer, said elongated cylinder fastened to said trailer, and said center post is carried by said elongated cylinder.
20. (New) The mobile crane apparatus according to claim 19, further comprising:
 - a control panel for said hydraulic power unit mounted on said trailer; and
 - an operator seat supported from said trailer and arranged to face said control panel,

wherein said hydraulic crane power unit is mounted on said trailer in front of said crane, and said control panel and said operator seat are mounted in front of said hydraulic crane power unit and laterally of said crane, and said hydraulic crane power unit is mounted in front of said crane.

21. (New) The mobile crane apparatus according to claim 17, wherein said hydraulically operated crane comprises about 50% of the total weight of said mobile crane apparatus.

22. (New) The mobile crane apparatus according to claim 17, wherein said at least one pair of wheels consists of two road transportation wheels along a single axle, and said center post is substantially equidistant from each of said road transportation wheels.

23. (New) The mobile crane apparatus according to claim 17, wherein said center post is substantially equidistant from each of said wheels of said one pair of wheels.

24. (New) The mobile crane apparatus according to claim 23 wherein said wheels comprise tires having a width of about 16 inches.

25. (New) The mobile crane apparatus according to claim 17 wherein said pair of wheels are arranged to rotate about a common axis, and said center post is substantially equidistant from each of said wheels along said common axis.